

### **REMARKS**

A new title of the present application has been provided at the suggestion of the Examiner.

The Abstract of the Disclosure, the specification and claims have been edited as suggested by the Examiner and accordingly it is believed that the Examiner's objections raised in paragraphs 5, 6 and 7 of the Examiner's Office Action letter have been eliminated. A substitute specification is being submitted together with a marked-up copy of the specification showing the changes made thereto. No new matter has been added.

Claims 1-9 have been rejected by the Examiner under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. This rejection is respectfully traversed.

In paragraph 10 of the Office Action letter, the Examiner objects to the phrase "the shortest distance." In an attempt to eliminate the Examiner's rejection, this expression has been amended to the phrase "a shortest distance." Furthermore, it should be considered that there is only one shortest distance between a point and an axis. A person skilled in the art would readily understand the intended meaning of the expression objected to by the Examiner. In any event, it is believed that the Examiner's rejection has been eliminated.

In paragraph 11 of the Office Action letter, the Examiner objects to the phrase "a gray axis defined as a straight line connecting a white point and a black point." In connection with this rejection it is believed that a person skilled in the art would readily understand the intended meaning of this expression. Examples and graphical representations of a color space including a gray axis in such a gray space, are well known in the art and are believed to be part of the common, generally understood knowledge within the purview of a skilled artisan. Moreover, in paragraph [0041], as an example, a gray axis in the  $L^*a^*b^*$  color space is described and it is indicated that in another color space a similar gray axis may be determined by determining a black point and a white point, the gray axis being a straight line in said colored space connecting

the black point and the white point. It should be recognized that only a single straight line exists between the black point and the white point and hence, the gray axis is sufficiently defined by the given definition. Accordingly, the Examiner is respectfully requested to reconsider his objection to the language as set forth in paragraph 11 of the Office Action letter.

In connection with the objection raised in paragraph 12 of the Examiner's Office Action letter, it should be noted that claim 3 has been amended to replace the expression "the analyzing step" with the recitation "a step of analyzing a relationship between the pixels in said cumulative histogram." Accordingly, it is believed that the Examiner's rejection of claim 3 has been eliminated.

Claims 1-19 have been rejected by the Examiner under 35 USC 103(a) as being unpatentable over Bares, U.S. Publication No. 2002/0075491 and further in view of Smilansky, U.S. Publication No. 2002/0102013. Also, claims 10-18, which are drawn to an image processing system, are rejected on the same basis as claims 1-19. It is believed that these rejections are clearly erroneous.

The present invention is directed to the image processing of pixelized images and more particularly to the judgement as to whether a pixelized image is a monochrome or a color image. In the image processing method and system of the present invention, a cumulative histogram is formed and provided to determine whether the image is a monochrome image or a color image.

The Bares reference is relied upon by the Examiner to disclose a method for determining the distance between a pixel value and a neutral axis, which corresponds to the gray axis as recited in claim 1 of the present application. However, the Bares reference does not disclose forming a cumulative histogram and determining from said histogram whether the image is a monochrome image or a color image. Thus, in contradistinction to the present invention, the Bares reference teaches that for each distance, a threshold is selected and each distance is compared to the threshold. Accordingly, each distance is treated separately and no histogram is required to be formed. As stated in claim 1 of the present application, the histogram is used to

analyze a relationship between the pixels in the histogram. Based on an outcome of this analysis, it is determined whether the image is a monochrome image or a color image. Accordingly, since the Bares reference does not suggest analyzing the relationship between the pixels from a histogram, it is believed that the prior art reference does not even remotely suggest the present invention.

The Examiner, recognizing the deficiencies in the Bares reference has further relied upon the Smilansky publication in an attempt to suggest the present invention. The Smilansky reference discloses a method for comparing two images (visual signal arrays) using, for example, a linear regression analysis. However, the linear regression analysis, or any other kind of suggested analysis is not performed on data retrieved for determining a color content, or the like as defined by the present invention. Hence, there is no suggestion or indication as to why one skilled in the art would combine the teachings of the Bares reference and the Smilansky reference as suggested by the Examiner. Furthermore, since there is no suggestion in the Bares reference to perform an analysis between the pixels and their distance to the gray axis, there is not even the remotest suggestion to provide such an analysis at all.

Accordingly, since both the Bares and Smilansky references possess significant defects when compared to the Applicants' inventive contribution, even if, *arguendo*, it would be possible to combine the references as suggested by the Examiner, said combination would still not suggest the present invention.

Accordingly, in view of the above amendments and remarks reconsideration of the objections and rejections and allowance of all of the claims of the present application are respectfully requested.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Joseph A. Kolasch Reg. No. 22,463 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

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